

REMARKS

Claims 1-13 and 15-25 are pending in the application upon entry of the amendments and new claims. Claims 1, 2, 6, 8, 9 and 16-19 have been amended for consistency and to better describe certain aspects of the invention. Favorable reconsideration in light of the amendments and the remarks which follow is respectfully requested.

The Amendments

The claims have been amended to recite an amine-borane compound as a boron source, thereby specifying one of the two alloy metals as boron. Amine-borane compounds form borane anions in an electroplating bath. Unlike in the case of ionic boron, the borane anions force reduction of metal on the cathode while at the same time being incorporated into the alloy matrix. Ionic boron is, in contrast, part of a conductivity salt that is not incorporated into the alloy matrix like boron originated from an amine-borane compound. In this connection, ionic boron is not equivalent with amine-boranes.

The Obviousness Rejections

Claims 1-6, 8, and 24 stand rejected under 35 U.S.C. §103(a) over JP 10-245693 (hereinafter "JP '693") in view of Passal. Claim 7 stands rejected under 35 U.S.C. §103(a) over JP '693 in combination with Passal further in view of Hui. Claims 9-12, 15-17, and 25 stand rejected under 35 U.S.C. §103(a) over JP '693 in view of Passal. Claim 13 stand rejected under 35 U.S.C. §103(a) over JP '693 in combination with Passal further in view of SU 1,544,847 (hereinafter "SU '847"). Claims 18-23 and 26 stand rejected under 35 U.S.C. §103(a) over JP '693 in view of Passal. Thus, all rejections involve JP '693 in combination with Passal.

JP '693 does not disclose any quaternary alloys. Only binary alloys and ternary alloys are specifically mentioned in JP '693. Passal only teaches Ni, Co, and Ni-Co

alloys. JP '693 and Passal, independently or in combination, fail to teach or suggest any quaternary alloys including nickel, cobalt, boron, and at least one other metal.

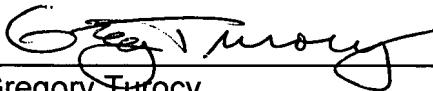
Moreover, JP '693 fails to teach or suggest employing an amine-borane compound as a boron source. Passal also fails to teach or suggest employing an amine-borane compound as a boron source. Amine-borane compounds form borane anions in an electroplating bath. Unlike in the case of ionic boron, the borane anions force reduction of metal on the cathode while at the same time being incorporated into the alloy matrix. Ionic boron is, in contrast, part of a conductivity salt that is not incorporated into an alloy matrix like boron originated from an amine-borane compound. In this connection, ionic boron is not equivalent with amine-boranes. Efficient incorporation of boron into the quaternary alloy matrix is a significant advantage of the claims. For this additional reason, JP '693 and Passal fail to teach or suggest all of the claimed features

Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees to our Deposit Account No. 50-1063.

Respectfully submitted,

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